

Claim Amendments

Please cancel claims 3, 20 and 25, and amend claims 1, 4, 5, 19, 21, 24 and 26 as follows:

1. (currently amended) A method comprising:
 - conveying a request by a mobile node to a home agent in a network requesting registration of home address of the mobile node;
 - authenticating the mobile node; [[and]]
 - storing the home address of the mobile node in the home agent, wherein the request includes a network access identity of the mobile node and the home address to be registered.
2. (previously amended) The method of claim 1, further comprising obtaining the home address by the mobile node.
3. (canceled).
4. (currently amended) The method of claim [[3]] 1, wherein the mobile node is authenticated using security information based on the network access identity.
5. (currently amended) The method of claim [[3]] 1, wherein the mobile node and the home agent share a security association identified by the network access identity, and the mobile node is authenticated based on the security association.
6. (previously presented) The method of claim 1, wherein the request also includes a mobile node authenticator for use in said authenticating.
7. (previously presented) The method of claim 5, wherein the request also includes a mobile node authenticator for use in said authenticating, and the mobile node authenticator is computed based on said security association.

8. (original) The method of claim 1, wherein the request also includes a care-of-address of the mobile node indicative of a current point of attachment to the network by the mobile node.

9. (previously presented) The method of claim 1, further comprising
 sending authentication and key material to the mobile node so as to allow the mobile node to provide the home agent with a mobile node authentication based on the authentication and key material when said authenticating requires a challenge-response procedure.

10. (original) The method of claim 1, wherein the mobile node is allowed to proceed with binding update messages based on the stored home address in the home agent when needed.

11. (previously presented) The method of claim 10, further comprising
 associating a lifetime to the registered home address so as to limit the duration in which the mobile node is allowed to proceed with the binding update messages.

12. (original) The method of claim 11, wherein the lifetime can be refreshed when the mobile node proceeds with a binding update message.

13. (original) The method of claim 11, wherein the lifetime can be refreshed with a further request by the mobile node to the home agent.

14. (previously presented) The method of claim 1, further comprising
 authenticating the request using a hash function.

15. (previously presented) The method of claim 1, further comprising
 storing a value indicative of the home address and a security parameter index in a security engine in the home agent so as to allow the home agent to authenticate a binding update message based on said stored value and the security parameter index.

16. (previously presented) The method of claim 1, further comprising providing proof by the mobile node that the mobile node owns and is authorized to use the home address.

17. (previously presented) The method of claim 8, further comprising providing proof by the mobile node that the mobile node owns and is authorized to use the care-of-address.

18. (original) The method of claim 1, wherein the home agent is discovered by the mobile node in a discovery process and the registration of the home address is conveyed to the discovered home agent.

19. (currently amended) A network comprising
at least a mobile node having a home address associated thereto, and
a home agent, wherein the mobile node is adapted to send a request to the home agent requesting the registration of the home address, and the home agent is adapted to authenticate the mobile node and to store the home address of the mobile node in the home agent, wherein the request includes a network access identity of the mobile node and the home address to be registered.

20. (canceled).

21. (currently amended) The network of claim [[20]] 19, wherein the home agent authenticates the mobile node using security information based on the network access identity.

22. (previously presented) The network of claim 19, wherein the mobile node and the home agent share a security association identifiable by the network access identity, and the home agent authenticates the mobile node based on the security association.

23. (previously presented) The network of claim 19, wherein the request includes a care-of-address of the mobile node indicative of a current point of attachment to the network by the mobile node.

24. (currently amended) A home agent in a network, comprising:

means, response to a request from a mobile node requesting registration of a home address of the mobile node with the home agent, for authenticating the mobile node; and

means, response to said authentication, for storing the home address, wherein the request includes a network access identity of the mobile node and the home address to be registered.

25. (canceled).

26. (currently amended) The home agent of claim [[25]] 24, wherein said authenticating means authenticates the mobile node based on the network access identity.

27. (previously presented) An apparatus comprising:

means for sending a request to a home agent in a network for registering a home address of the apparatus with the home agent, wherein the request includes the network access identity so as to allow the home agent to authenticate the mobile device based on the network access identity.

28. (previously presented) The apparatus of claim 27, further comprising means for discovering the home agent in a discovery process.

29. (previously presented) The apparatus of claim 27, further adapted to sending proof that the apparatus owns and is authorized to use the home address when registering the home address with the home agent.

30. (previously presented) The apparatus of claim 27, wherein the request further includes a mobile device authenticator so as to allow the home agent to authenticate the apparatus based on the authenticator.